

~~a pedal crank assembly rotatably mounted in the frame; a pedal sprocket fixedly attached to the pedal crank assembly;~~  
~~an electric motor, having an axle and a rotatable outer case, the~~assembly and a fixed  
~~assembly, said motor mounted to the~~said frame by the axlesaid fixed assembly;  
~~a sprocket fixedly mounted to the outer case~~said rotatable assembly of said motor;  
~~a freewheel rotatably mounted to the outer case of said motor, the freewheel having a sprocket;~~a first chain engaged to said motor sprocket and a sprocket on thesaid hub  
~~for transferring rotary motion from the motor sprocket to the hub sprocket; and~~said  
~~motor to said wheel;~~  
a pedal crank assembly rotatably mounted in said frame;  
~~a second chain engaged to said freewheel sprocket~~uni-directional drive engaging the  
~~rotatable assembly of said motor and said pedal sprocket~~crank assembly for  
~~transferring rotary motion from the pedal sprocket to the freewheel sprocket;~~said  
~~pedal crank to said motor, but not from said motor to said crank,~~  
 whereby either said motor or said pedal crank can drive said vehicle, independently or in unison.

2. (currently amended) The electric drive vehicle of claim 1, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.

3. (currently amended) The electric drive bicycle of claim 2, wherein said multi-speed hub ~~is of the type that~~ has internal gears that can be shifted ~~while riding said bicycle.~~

4. (currently amended) The electric drive bicycle of claim 2, wherein said multi-speed hub ~~is of the type that~~ has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the chain to engage any of said sprockets ~~while riding said bicycle.~~

5. (currently amended) The electric drive vehicle of claim 1, wherein said electric motor is a brush-less, direct current, slow speed, gear-less, ~~bicycle wheel hub motor.~~  
motor, and wherein said motor is connected to a power supply,

whereby said pedal crank can efficiently drive said motor for recharging the power supply.

6. (currently amended) An electric drive vehicle comprising:

a frame;

a wheel, having a hub with at least one sprocket, the wheel rotatably mounted in ~~the~~  
frame; said frame;

~~a pedal crank assembly rotatably mounted in the frame;~~

~~a pedal sprocket fixedly attached to the pedal crank assembly;~~

~~an electric motor, having an axle and a rotatable outer case, the~~assembly and a fixed  
~~assembly, said motor mounted to the~~said frame by the axle;~~a first sprocket fixedly~~  
~~mounted to the outer case of said motor~~said fixed assembly;

~~a first freewheel~~jackshaft rotatably mounted to the ~~outer case of said motor, the~~  
~~freewheel having a sprocket;~~frame;

~~a first sprocket fixedly mounted to said rotatable motor assembly;~~

~~a second sprocket fixedly mounted to the jackshaft;~~

~~a first chain engaged to said first motor sprocket and a~~the second sprocket on the  
~~hub~~jackshaft for transferring rotary motion ~~from the motor sprocket to the hub~~  
~~sprocket; a second chain engaged to said motor freewheel sprocket and said pedal~~  
~~sprocket for transferring rotary motion from the pedal sprocket to the~~  
~~freewheel;~~between said motor and said jackshaft;

~~a second freewheel having a sprocket rotatably mounted to the hub;~~

~~a second~~third sprocket fixedly mounted to ~~the outer case of said motor;~~jackshaft;

~~a third~~second chain engaged to said ~~hub~~third jackshaft sprocket and ~~said second~~  
~~motor freewheel~~a hub sprocket for transferring rotary motion ~~from the hub to the~~  
~~second motor freewheel sprocket~~said jackshaft to said wheel;

~~a pedal crank assembly rotatably mounted in said frame; and~~

a uni-directional drive engaging the jackshaft and said pedal crank assembly for transferring rotary motion from said pedal crank to said jackshaft, but not from said jackshaft to said crank,

whereby either said motor or said pedal crank can drive said vehicle, independently or in unison, ~~and whereby said wheel can drive said motor for regenerative braking,~~

7. (currently amended) The electric drive vehicle of claim ~~11,6~~, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.
8. (currently amended) The electric drive bicycle of claim ~~12,7~~, wherein said multi-speed hub ~~is of the type that~~ has internal gears that can be shifted ~~while riding said bicycle.~~
9. (currently amended) The electric drive bicycle of claim ~~12,7~~, wherein said multi-speed hub ~~is of the type that~~ has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the second chain to engage any of said sprockets ~~while riding said bicycle.~~
10. (currently amended) The electric drive vehicle of claim ~~11,6~~, wherein said electric motor is a brush-less, direct current, slow speed, gear-less, ~~bicycle wheel hub motor,~~ motor, and wherein said motor is connected to a power supply,

whereby said pedal crank can efficiently drive said motor for recharging the power supply.

11.-43. (canceled).

44. (new) A method of providing an electric drive on a pedal powered vehicle, the vehicle having a frame, a wheel with a hub and at least one sprocket, and a pedal crank, comprising:

providing an electric motor, having a rotatable assembly and a fixed assembly;

fixedly mounting said fixed motor assembly to the frame of said vehicle;

fixedly mounting a sprocket to said rotatable assembly of said motor;

engaging a first chain around said sprocket on said motor and a sprocket on said hub;

engaging a uni-directional drive between the rotatable assembly of said motor and said pedal crank assembly for transferring rotary motion from said pedal crank to said motor, but not from said motor to said crank,

whereby either said motor or said pedal crank can drive said vehicle independently or in unison.

45. (new) The electric drive method of claim 44, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.

46. (new) The electric drive method of claim 45, wherein said multi-speed hub has internal gears that can be shifted.

47. (new) The electric drive method of claim 45, wherein said multi-speed rear hub has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the said first drive chain to engage any of said sprockets.

48. (new) The electric drive method of claim 44, wherein said electric motor is a brush-less, direct current, slow speed, gear-less motor, and wherein said motor is connected to a power supply,

whereby said pedal crank can efficiently drive said motor for recharging the power supply.

49. (new) A method for providing an electric drive on a pedal powered vehicle, the vehicle having a frame, a wheel with a hub and at least one sprocket, and a pedal crank, comprising:

providing an electric motor, having a rotatable assembly and a fixed assembly;

fixedly mounting said fixed motor assembly to the frame of said vehicle;

rotatably mounting a jackshaft to said frame;

mounting a first sprocket fixedly mounted to said rotatable motor assembly;

mounting a second sprocket fixedly mounted to the jackshaft;

engaging a first chain to said first motor sprocket and the second sprocket on the

jackshaft for transferring rotary motion between said motor and said jackshaft;

fixedly mounting a third sprocket to said jackshaft;

engaging a chain to said jackshaft sprocket and a hub sprocket for transferring rotary

motion from said jackshaft to said wheel; and

engaging a uni-directional drive between the jackshaft and said pedal crank assembly for transferring rotary motion from said pedal crank to said jackshaft, but not from said jackshaft to said crank,  
whereby either said motor or said pedal crank can drive said vehicle, independently or in unison.

50. (new) The electric drive method of claim 49, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.

51. (new) The electric drive method of claim 50, wherein said multi-speed hub has internal gears that can be shifted.

52. (new) The electric drive method of claim 50, wherein said multi-speed rear hub has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the said drive chain to engage any of said sprockets.

53. (new) The electric drive method of claim 49, wherein said electric motor is a brush-less, direct current, slow speed, gear-less motor, and wherein said motor is connected to a power supply,  
whereby said pedal crank can efficiently drive said motor for recharging the power supply.

54. (new) A mechanism for providing an electric drive on a pedal powered vehicle, the vehicle having a frame, a wheel with a hub and at least one sprocket, and a pedal crank, comprising:
- an electric motor, having a rotatable assembly and a fixed assembly, said motor mounted to said frame by said fixed assembly;
- a sprocket fixedly mounted to said rotatable assembly of said motor;
- a chain engaged to said motor sprocket and a sprocket on said hub for transferring rotary motion from said motor to said wheel;
- a pedal crank assembly rotatably mounted in said frame; and
- a uni-directional drive engaging the rotatable assembly of said motor and said pedal crank assembly for transferring rotary motion from said pedal crank to said motor, whereby either said motor or said pedal crank can drive said vehicle, independently or in unison.
55. (new) The mechanism of claim 54, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.
56. (new) The mechanism of claim 55, wherein said multi-speed hub has internal gears that can be shifted.
57. (new) The mechanism of claim 55, wherein said multi-speed hub has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the chain to engage any of said sprockets.



58. (new) The mechanism of claim 54, wherein said electric motor is a brush-less, direct current, slow speed, gear-less motor, and wherein said motor is connected to a power supply,  
  
whereby said pedal crank can efficiently drive said motor for recharging the power supply.

59. (new) A mechanism for providing an electric drive on a pedal powered vehicle, the vehicle having a frame, a wheel with a hub and at least one sprocket, and a pedal crank, comprising:

an electric motor, having a rotatable assembly and a fixed assembly, said motor mounted to said frame by said fixed assembly;

a jackshaft rotatably mounted to the frame;

a reduction drive mounted on the higher speed side to said rotatable motor assembly and on the lower speed side to said jackshaft for transferring rotary motion from said motor to said jackshaft and vise versa;

a sprocket fixedly mounted to said jackshaft;

a chain engaged to said jackshaft sprocket and a hub sprocket for transferring rotary motion from said jackshaft to said wheel;

a pedal crank assembly rotatably mounted in said frame; and

a uni-directional drive engaging said jackshaft and said pedal crank assembly for transferring rotary motion from said pedal crank to said jackshaft,